TDMS No. 88006 - 03
Test Type: CHRONIC

Species/Strain: RATS/F 344

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE CAS Number: 98-83-9 Pathologist: RENNE, R.

L REININE, R.

Revised F1

C Number: C88006B

Route: RESPIRATORY EXPOSURE WHOLE BODY

Lock Date: 03/26/2004

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:44:41
First Dose M/F: 08/06/01 / 08/06/01

a - Number of animals examined microscopically at site and number of animals with lesion

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ALPHA-METHYLSTYRENE **CAS Number:** 98-83-9

Pathologist: RENNE, R.

Lab: BNW

Date Report Regsted: 02/02/2006

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Species/Strain: RATS/F 344

FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Accidently Killed			1	1
Moribund Sacrifice	19	15	21	25
Natural Death Survivors	4	3	5	2
Natural Death				1
Terminal Sacrifice	27	32	23	21
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Intestine Large, Cecum	(48)	(47)	(46)	(47)
Ulcer	\ -/	1 [3.0]	\ -/	` /
Epithelium, Atrophy		1 [3.0]		
Intestine Small, Duodenum	(49)	(48)	(47)	(47)
Ulcer	(40)	1 [4.0]	(4.4)	(47)
Intestine Small, Jejunum	(46)	(47)	(44)	(47)
Inflammation, Chronic Active		1 [3.0]		
Epithelium, Ulcer Liver	(50)	1 [4.0] (50)	(50)	(50)
Angiectasis	(30)	1 [4.0]	1 [3.0]	4 [3.8]
Basophilic Focus	2	8	3	4 [5.6] 1
Basophilic Focus, Multiple	_	1	· ·	•
Bile Stasis		1 [4.0]		
Clear Cell Focus	8	7	5	3
Clear Cell Focus, Multiple	1			_
Degeneration, Cystic	2 [2.5]	2 [2.5]	3 [2.3]	1 [3.0]
Hemorrhage		0.[4.0]	E [4 0]	1 [4.0]
Hepatodiaphragmatic Nodule Necrosis	2 [2 5]	2 [4.0]	5 [4.0]	10 [4.0]
Necrosis Thrombosis	2 [3.5]	2 [2.5] 1 [3.0]	3 [3.3] 1 [3.0]	4 [3.3] 1 [4.0]
Vacuolization Cytoplasmic	3 [3.3]	1 [3.0] 1 [2.0]	4 [2.5]	1 [4 .0]
Bile Duct, Dilatation	J [J.J]	2 [4.0]	رد.ی	
Bile Duct, Hyperplasia	30 [1.6]	42 [1.7]	39 [1.9]	30 [2.1]
Mesentery	(15)	(15)	(8)	(5)

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P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE **CAS Number:** 98-83-9 Pathologist: RENNE, R.

Time Report Reqsted: 13:44:41 First Dose M/F: 08/06/01 / 08/06/01

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Lab: BNW

Species/Strain: RATS/F 344

FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM	
Necrosis	15 [2.9]	14 [2.9]	8 [3.1]	5 [3.0]	
Fat, Hemorrhage		1 [3.0]			
Oral Mucosa	(1)	(0)	(0)	(1)	
Gingival, Hyperplasia, Squamous, Focal	1 [3.0]			1 [4.0]	
Pancreas	(50)	(50)	(50)	(50)	
Acinus, Atrophy	2 [3.0]	2 [3.0]	1 [3.0]		
Stomach, Forestomach	(50)	(50)	(49)	(50)	
Hyperplasia, Squamous	1 [3.0]		1 [4.0]	1 [4.0]	
Inflammation, Suppurative				1 [3.0]	
Necrosis	1 [4.0]				
Ulcer	4 [4.0]	1 [4.0]	2 [4.0]		
Epithelium, Mineralization		1 [3.0]			
Stomach, Glandular	(50)	(50)	(49)	(50)	
Erosion	2 [1.5]	,	2 [2.5]	3 [1.3]	
Ulcer	1 [4.0]		1	- [-]	
Epithelium, Mineralization	,	1 [3.0]			
Tongue	(0)	(1)	(0)	(1)	
Epithelium, Hyperplasia	(-)	(-)	(-)	1 [3.0]	
Tooth	(0)	(0)	(2)	(0)	
Inflammation, Suppurative	(-)	(-)	1 [4.0]	(-)	
Peridontal Tissue, Inflammation			1 [4.0]		
CARDIOVASCULAR SYSTEM					
Blood Vessel	(0)	(1)	(2)	(0)	
Pulmonary Artery, Infiltration Cellular,	(5)	(.)	1 [4.0]	(3)	
Polymorphonuclear			. [•]		
Pulmonary Artery, Mineralization			1 [3.0]		
Heart	(50)	(50)	(50)	(50)	
Cardiomyopathy	7 [1.9]	3 [1.7]	4 [1.5]	6 [2.8]	
Atrium, Myocardium, Hypertrophy	. [0]	1 [3.0]	. [0]	0 [2.0]	
Atrium, Necrosis		. [0.0]		1 [4.0]	
Atrium, Thrombosis	3 [4.0]	1 [4.0]	5 [3.8]	5 [3.8]	
Myocardium, Hypertrophy	رح.د]	1 [3.0]	0 [0.0]	3 [0.0]	
Valve, Thrombosis	1 [3.0]	1 [0.0]			
ENDOCRINE SYSTEM					
	(50)	(50)	(50)	(50)	
Adrenal Cortex	(50)	(50)	(50)	(50)	

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P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE CAS Number: 98-83-9

Pathologist: RENNE, R.

Lab: BNW

Date Report Regsted: 02/02/2006

First Dose M/F: 08/06/01 / 08/06/01

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Species/Strain: RATS/F 344

FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM	
Atrophy	1 [4.0]	1 [4.0]			
Hyperplasia	14 [2.4]	10 [2.7]	12 [2.8]	9 [2.8]	
Hypertrophy	2 [2.0]	2 [2.5]	[=.0]	0 [2.0]	
Mineralization	1 [3.0]	- []			
Necrosis	[]		1 [2.0]		
Vacuolization Cytoplasmic	9 [2.2]	21 [2.0]	10 [2.2]	5 [2.8]	
Adrenal Medulla	(50)	(50)	(50)	(50)	
Atrophy	1 [4.0]	,	, ,	,	
Hyperplasia	15 [3.0]	13 [2.5]	9 [2.7]	14 [3.3]	
Islets, Pancreatic	(50)	(50)	(50)	(50)	
Hyperplasia	1 [3.0]	3 [4.0]	, ,	,	
Parathyroid Gland	(47)	(49)	(48)	(47)	
Hyperplasia	1 [2.0]	,	1 [3.0]	,	
Pituitary Gland	(49)	(49)	(49)	(49)	
Cyst	, ,	1 [4.0]	1 [2.0]	1 [4.0]	
Hemorrhage		1 [4.0]			
Hyperplasia	9 [2.6]	8 [3.4]	6 [2.5]	14 [3.0]	
Thyroid Gland	(49)	(50)	(50)	(50)	
Cyst	, ,	,	, ,	1 [3.0]	
C-cell, Hyperplasia	8 [1.9]	9 [2.7]	9 [1.8]	6 [1.8]	
Follicle, Cyst				1 [3.0]	
Follicular Cell, Hyperplasia		3 [2.3]	1 [1.0]	2 [2.0]	
GENERAL BODY SYSTEM					
Peritoneum	(0)	(2)	(0)	(3)	
GENITAL SYSTEM					
Epididymis	(50)	(50)	(50)	(50)	
Penis	(1)	(0)	(0)	(0)	
Inflammation, Chronic Active	1 [3.0]	(0)	(0)	(0)	
Preputial Gland	(50)	(50)	(50)	(50)	
Cyst	1 [4.0]	2 [3.5]	2 [4.0]	1 [4.0]	
Hyperplasia	2 [3.5]	4 [3.8]	2 [4.0] 1 [4.0]	2 [3.5]	
Inflammation, Suppurative	2 [0.0]	- [0.0]	1 [4.0]	2 [0.0]	
Prostate	(50)	(50)	(50)	(50)	
Cyst	(00)	(00)	1 [4.0]	(55)	
Hyperplasia	6 [2.0]		1 [1.0]	2 [1.0]	
, ροι ριασία	رح.٠١		. []	- []	

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P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE **CAS Number:** 98-83-9

Pathologist: RENNE, R.

First Dose M/F: 08/06/01 / 08/06/01 Lab: BNW

Date Report Regsted: 02/02/2006

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Species/Strain: RATS/F 344

Route: RESPIRATORY EXPOSURE WHOLE BODY

FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM	
Inflammation, Suppurative	34 [1.6]	35 [1.6]	31 [1.7]	24 [1.5]	
Seminal Vesicle	(50)	(50)	(50)	(50)	
Cyst			1 [4.0]		
Dilatation		4 [0.0]	1 [4.0]		
Inflammation, Suppurative	(50)	1 [3.0]	1 [4.0]	(50)	
Testes Artery, Inflammation, Chronic Active	(50)	(50)	(50)	(50)	
Germinal Epithelium, Atrophy	5 [3.6]	5 [4.0]	1 [3.0] 8 [4.0]	6 [3.3]	
Germinal Epithelium, Mineralization	3 [3.0]	3 [4.0] 1 [4.0]	0 [4.0]	0 [5.5]	
Interstitial Cell, Hyperplasia	6 [2.2]	7 [1.6]	10 [1.9]	7 [1.9]	
EMATOPOIETIC SYSTEM					
Bone Marrow	(50)	(50)	(50)	(50)	
Lymph Node	(6)	(3)	(6)	(12)	
Deep Cervical, Hemorrhage				1 [3.0]	
Lymph Node, Bronchial	(10)	(8)	(14)	(15)	
Hyperplasia, Histiocytic			1 [3.0]		
Infiltration Cellular, Histiocyte	(47)	(25)	1 [3.0]	(40)	
Lymph Node, Mediastinal Angiectasis	(17) 1 [3.0]	(25)	(20) 1 [4.0]	(18)	
Hemorrhage	ال.د] ۱	1 [4.0]	ı [4 .∪]		
Hyperplasia, Lymphoid		2 [2.5]		1 [2.0]	
Infiltration Cellular, Histiocyte		2 [2.0]	1 [3.0]	. [2.0]	
Pigmentation			1 [3.0]	1 [3.0]	
Lymph Node, Mesenteric	(50)	(49)	(49)	(50)	
Spleen	(50)	(50)	(49)	(50)	
Accessory Spleen	1		1 [4.0]	1	
Fibrosis	2 [3.5]	1 [3.0]	1 [3.0]	1 [3.0]	
Hematopoietic Cell Proliferation	1 [4.0]	1 [3.0]		0.14.03	
Hemorrhage		1 [4.0]		2 [4.0]	
Hyperplasia, Lymphoid Necrosis	2 (2 2)	1 [2.0]	E [4 0]	1 [4.0]	
Thymus	3 [3.3] (42)	3 [3.7] (49)	5 [4.0] (47)	8 [3.9] (47)	
Cyst	(44)	1 [3.0]	(+1)	(41)	
Inflammation		. [0.0]	1 [4.0]		
Thrombosis			1 [4.0]		

INTEGUMENTARY SYSTEM

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Species/Strain: RATS/F 344

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9 Pathologist: RENNE, R. Date Report Regsted: 02/02/2006

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FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM
Mammary Gland	(48)	(49)	(50)	(50)
Galactocele	2 [4.0]	1 [4.0]	3 [4.0]	2 [4.0]
Hyperplasia	2 []	1 [2.0]	0[0]	2 [0]
Skin	(50)	(50)	(50)	(50)
Cyst Epithelial Inclusion	2 [4.0]	3 [4.0]		
Hyperkeratosis		2 [3.5]	1 [3.0]	2 [4.0]
Hyperplasia, Squamous		1 [3.0]	4 [4 0]	
Inflammation, Chronic Ulcer	1 [4.0]	1 [3.0]	1 [4.0] 2 [3.0]	2 [2 7]
Subcutaneous Tissue, Metaplasia,	1 [4.0]	2 [4.0]	2 [3.0] 1 [3.0]	3 [3.7]
Osseous			1 [5.0]	
Subcutaneous Tissue, Mineralization	1 [3.0]			
USCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Hyperostosis	1 [3.0]	(00)	(00)	(55)
Maxilla, Fracture			1	
Skeletal Muscle	(2)	(1)	(1)	(0)
ERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Compression	11 [3.9]	11 [3.6]	8 [2.6]	2 [2.5]
Gliosis				1 [2.0]
Hemorrhage	7 [3.3]	2 [3.5]	4 [3.0]	2 [4.0]
Cerebrum, Demyelination, Focal	4 [0 0]			1 [4.0]
Cerebrum, Necrosis, Focal Choroid Plexus, Hemorrhage	1 [3.0]		1 [4.0]	
Meninges, Hemorrhage			1 [4.0]	1 [1.0]
Werninges, Hemorriage				
ESPIRATORY SYSTEM				
Larynx	(50)	(49)	(50)	(50)
Foreign Body	4 [2.8]	5 [4.0]	2 [4.0]	5 [4.0]
Inflammation, Suppurative	6 [1.2]		4 [1.5]	2 [2.0]
Inflammation, Chronic	4 [1.8]	11 [1.5]	6 [1.3]	10 [2.1]
Epiglottis, Hyperplasia				1 [1.0]

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Species/Strain: RATS/F 344

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE **CAS Number:** 98-83-9

Pathologist: RENNE, R.

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FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM	
Respiratory Epithelium, Hyperplasia Respiratory Epithelium, Metaplasia,	1 [2.0]	2 [2.0]			
Squamous	. []				
Lung	(50)	(50)	(50)	(50)	
Hemorrhage	7 [2.1]	3 [2.7]	1 [2.0]	7 [2.9]	
Inflammation, Suppurative		- 1	1 [4.0]	1	
Inflammation, Chronic	4 [2.0]	1 [2.0]	3 [1.7]	2 [2.0]	
Thrombosis	1 [3.0]	. []	- []	_ [1	
Alveolar Epithelium, Degeneration, Mucoid, Focal	L1		1 [3.0]		
Alveolar Epithelium, Hyperplasia	3 [2.3]	6 [2.7]	6 [3.3]	3 [3.0]	
Alveolus, Emphysema		2 [2.0]	1 [4.0]		
Alveolus, Infiltration Cellular, Histiocyte	11 [1.4]	12 [1.5]	10 [2.0]	4 [1.8]	
Interstitium, Fibrosis	3 [1.7]		2 [2.5]	1 [2.0]	
Mediastinum, Inflammation, Suppurative			1 [4.0]		
Nose	(50)	(50)	(50)	(49)	
Foreign Body	6	4	3	2	
Hemorrhage			1 [2.0]		
Inflammation, Suppurative	10 [2.0]	8 [2.1]	7 [2.4]	5 [2.4]	
Inflammation, Chronic		1 [1.0]	2 [2.0]		
Glands, Dilatation	3 [2.0]	7 [2.1]	6 [2.0]		
Goblet Cell, Hyperplasia	5 [2.2]	5 [1.8]	5 [2.4]	5 [2.2]	
Nasolacrimal Duct, Inflammation,	2 [1.5]	1 [2.0]	1 [2.0]		
Suppurative	r -1	F -3	r -1		
Nerve, Olfactory Epithelium,				1 [2.0]	
Degeneration				t -1	
Olfactory Epithelium, Degeneration	1 [2.0]	3 [1.3]	3 [1.7]	16 [1.0]	
Olfactory Epithelium, Degeneration,	1 [2.0]	1 [1.0]	1 [2.0]		
Hyaline	1	F -3	r -1		
Olfactory Epithelium, Hyperplasia, Basal		17 [1.0]	18 [1.2]	43 [1.8]	
Cell					
Olfactory Epithelium, Metaplasia	2 [1.5]	1 [2.0]	3 [1.7]	2 [2.0]	
Respiratory Epithelium, Degeneration, Hyaline	2 [1.5]		2 [1.5]		
Respiratory Epithelium, Hyperplasia		1 [2.0]		2 [1.0]	
Respiratory Epithelium, Metaplasia,				1 [3.0]	
Squamous					
Pleura	(6)	(5)	(6)	(5)	
Inflammation, Chronic	5 [1.8]	5 [1.2]	6 [2.0]	5 [1.6]	
Mesothelium, Hyperplasia		1 [1.0]			

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Species/Strain: RATS/F 344

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE **CAS Number:** 98-83-9

Pathologist: RENNE, R.

Date Report Regsted: 02/02/2006

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Eye (49) (49) (50) (49) Atrophy 1 [4.0] 1 [4.0] Cornea, Fibrosis 1 [3.0] Cornea, Hyperplasia, Squamous 1 [1.0] 1 [2.0] Cornea, Mineralization 1 [4.0] Lens, Cataract 3 [3.0] 5 [3.4] 1 [4.0] Retina, Atrophy 1 [4.0] 1 [4.0] Sclera, Metaplasia, Osseous 32 [1.8] 32 [1.8] 32 [1.9] 25 [2.2] Harderian Gland (50) (50) (50) (50) Inflammation, Chronic Zymbal's Gland (0) (1) (2) (2) Inflammation (13.0]						
Atrophy	FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM	
Atrophy						
Atrophy Cornea, Fibrosis	PECIAL SENSES SYSTEM					
Atrophy Cornea, Fibrosis	Eye	(49)	(49)	(50)	(49)	
Cornea, Fibrosis Cornea, Hyperplasia, Squamous Cornea, Mineralization Lens, Cataract 3 [3.0] Lens, Cataract 3 [1.0] Lens, Cataract 3 [1.0] Solera, Metaplasia, Osseous 32 [1.8] 32 [1.8] 32 [1.8] 32 [1.9] 25 [2.2] Larderian Gland (50) (50) (50) (50) (50) (50) (50) Lens, Cataract (50) (50) (50) (50) Lens, Cataract (50) (50) (50) Lens, Cataract (50) (50) Lens, Cataract (60) Lens, Cataract (60) Lens, Cataract (60) Lens, Cataract (6	Atrophy	, ,	, ,	1 [4.0]	1 [4.0]	
Correa, Mineralization 1 [4.0] Lens, Cataract 3 [3.0] 5 [3.4] 1 [4.0] Retina, Atrophy 1 [4.0] 1 [4.0] Sclera, Metaplasia, Osseous 32 [1.8] 32 [1.8] 32 [1.9] 25 [2.2] -tarderian Gland (50) (50) (50) (50) Inflammation, Chronic 2 [2.0] Zymbal's Gland (0) (1) (2) (2) Inflammation 1 [3.0] NARY SYSTEM Kidney (50) (50) (50) (50) (50) Cyst 2 2 2 2 Infarct 3 5 Nephropathy 41 [2.2] 46 [2.3] 46 [2.4] 45 [2.4] Thrombosis 1 [4.0] Bilateral, Infarct 1 1 [2.0] 1 [2.0] Bilateral, Infarct, Multiple 1 1 [3.0] Cortex, Renal Tubule, Accumulation, Hyaline Droplet Glomerulus, Fibrosis 1 [4.0] Felvis, Transitional Epithelium, 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Hyperplasia Felvis, Transitional Epithelium, 1 [3.0]	Cornea, Fibrosis					
Lens, Cataract 3 3 3 0 5 3 4 1 4 0 Retina, Atrophy 1 1 4 0 Retina, Atrophy 1 1 4 0 Sclera, Metaplasia, Osseous 32 1 8 Barderian Gland (50) (50) (50) (50) (50) Inflammation, Chronic 2 2 0 Symbal's Gland (0) (1) (2) (2) (2) Inflammation 1 1 3 0 NARY SYSTEM Kidney (50) (50) (50) (50) (50) Cyst 2 2 2 2 Inflarct 3 5 Nephropathy 41 2 2 46 2 3 46 2 45 2 Thrombosis 1 4 0 Bilateral, Pelvis, Dilatation 1 1 2 0 Bilateral, Infarct, Multiple 1 1 Cortex, Renal Tubule, Accumulation, Hyaline Droplet Glomerulus, Fibrosis 1 4 0 Glomerulus, Fibrosis 1 4 0 Pelvis, Transitional Epithelium, 1 3 0			1 [1.0]		1 [2.0]	
Retina, Atrophy 1 [4.0] 1 [4.0] 2 25 [2.2] 4 2 2 2 [2.0] 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		1 [4.0]				
Sclera, Metaplasia, Osseous 32 [1.8] 32 [1.8] 32 [1.9] 25 [2.2] Harderian Gland (50) (50) (50) (50) Inflammation, Chronic 2 [2.0] (2) (2) Zymbal's Gland (0) (1) (2) (2) Inflammation (50) (50) (50) (50) NARY SYSTEM Kidney (50) (50) (50) (50) Cyst 2 2 2 Infarct 3 5 5 Nephropathy 41 [2.2] 46 [2.3] 46 [2.4] 45 [2.4] Thrombosis 1 [4.0] 1 [2.0] 1 [4.0] Bilateral, Pelvis, Dilatation 1 [2.0] 1 [2.0] 1 [3.0] Bilateral, Infarct, Multiple 1 [4.0] 1 [3.0] 1 [4.0] 1 [3.0] Cortex, Renal Tubule, Accumulation, Hyaline Droplet 1 [4.0] 1 [4.0] 1 [3.0] 33 [1.4] Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, Hyperplasia 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0]					1 [4.0]	
Harderian Gland (50) (50) (50) (50) (50) (50) (50) (50) (50) (50) (50) (50) (50) (20						
Inflammation, Chronic Zymbal's Gland (0) (1) (2) (2) (2) (2) (2) Inflammation (0) (1) (2) (2) (2) (2) (2) (3) (4) (4) (4) (5) (5) (5) (5) (5) (5) (5) (5) (5) (5	Sclera, Metaplasia, Osseous					
Zymbal's Gland Inflammation (0) (1) (2) (2) (2) Inflammation (1) (2) (2) (2) Inflammation (1) (2) (2) (2) Inflammation (1) (3.0] (2) (2) Inflammation (1) (3.0] (3		(50)	(50)		(50)	
NARY SYSTEM Sidney Signey Signe		(0)	(4)		(0)	
NARY SYSTEM (idney (50) (50) (50) (50) (50) Cyst 2 2 2 Infarct 3 5 Nephropathy 41 [2.2] 46 [2.3] 46 [2.4] 45 [2.4] Thrombosis 1 [4.0] Bilateral, Pelvis, Dilatation 1 [2.0] 1 [2.0] Bilateral, Infarct 1 Bilateral, Infarct 1 Cortex, Renal Tubule, Accumulation, 1 [4.0] Hyaline Droplet Glomerulus, Fibrosis 1 [4.0] Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, 1 [3.0] Pelvis, Transitional Epithelium, 1 [3.0]		(0)	(1)	(2)	(2)	
Kidney (50) (50) (50) (50) Cyst 2 2 2 Infarct 3 5 Nephropathy 41 [2.2] 46 [2.3] 46 [2.4] 45 [2.4] Thrombosis 1 [2.0] 1 [2.0] Bilateral, Pelvis, Dilatation 1 [2.0] 1 [2.0] Bilateral, Infarct 1 1 Bilateral, Infarct, Multiple 1 1 Cortex, Renal Tubule, Accumulation, Hyaline Droplet 1 [4.0] 1 [3.0] Glomerulus, Fibrosis 1 [4.0] 1 [1.0] 33 [1.4] Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, Hyperplasia 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Pelvis, Transitional Epithelium, Transitional Ep	iiiiaiiiiialioii			1 [5.0]		
Cyst Infarct 2 2 2 Infarct 3 5 Nephropathy 41 [2.2] 46 [2.3] 46 [2.4] 45 [2.4] Thrombosis 1 [4.0] 1 [4.0] Bilateral, Pelvis, Dilatation 1 [2.0] 1 [2.0] Bilateral, Infarct 1 1 Bilateral, Infarct, Multiple 1 1 Cortex, Renal Tubule, Accumulation, Hyaline Droplet 1 [4.0] 1 [3.0] Glomerulus, Fibrosis 1 [4.0] 1 [1.0] 33 [1.4] Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, Hyperplasia 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Pelvis, Transitional Epithelium, Transitional E	RINARY SYSTEM					
Cyst Infarct 2 2 2 Infarct 3 5 Nephropathy 41 [2.2] 46 [2.3] 46 [2.4] 45 [2.4] Thrombosis 1 [4.0] 1 [4.0] Bilateral, Pelvis, Dilatation 1 [2.0] 1 [2.0] Bilateral, Infarct 1 1 Bilateral, Infarct, Multiple 1 1 Cortex, Renal Tubule, Accumulation, Hyaline Droplet 1 [4.0] 1 [3.0] Glomerulus, Fibrosis 1 [4.0] 1 [1.0] 33 [1.4] Papilla, Mineralization 1 [2.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, Hyperplasia 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Pelvis, Transitional Epithelium, Transitional Ep	Kidney	(50)	(50)	(50)	(50)	
Nephropathy 41 [2.2] 46 [2.3] 46 [2.4] 45 [2.4] Thrombosis 1 [4.0] 1 [4.0] Bilateral, Pelvis, Dilatation 1 [2.0] 1 [2.0] Bilateral, Infarct 1 1 Bilateral, Infarct, Multiple 1 1 Cortex, Renal Tubule, Accumulation, Hyaline Droplet 1 [4.0] 1 [3.0] Glomerulus, Fibrosis 1 [4.0] 1 [1.0] 33 [1.4] Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, Hyperplasia 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Pelvis, Transitional Epithelium, Transitional Epithelium				2		
Thrombosis 1 [4.0] Bilateral, Pelvis, Dilatation 1 [2.0] 1 [2.0] Bilateral, Infarct 1 Bilateral, Infarct, Multiple 1 Cortex, Renal Tubule, Accumulation, 1 [4.0] 1 [3.0] Hyaline Droplet Glomerulus, Fibrosis 1 [4.0] Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Hyperplasia Pelvis, Transitional Epithelium, 1 [3.0]						
Bilateral, Pelvis, Dilatation Bilateral, Infarct Bilateral, Infarct Bilateral, Infarct, Multiple Cortex, Renal Tubule, Accumulation, Hyaline Droplet Glomerulus, Fibrosis Papilla, Mineralization Pelvis, Transitional Epithelium, Pelvis, Transitional Epithelium, Pelvis, Transitional Epithelium, Pelvis, Transitional Epithelium, 1 [3.0] 1 [2.0] 1 [2.0] 1 [4.0] 1 [3.0] 1 [4.0] 1 [4.0] 1 [6 [1.0] 1 [1.0] 1 [2.0] 1 [2.0] 1 [3.0]		41 [2.2]	46 [2.3]	46 [2.4]		
Bilateral, Infarct 1 Bilateral, Infarct, Multiple 1 Cortex, Renal Tubule, Accumulation, 1 [4.0] 1 [3.0] Hyaline Droplet 1 1 [4.0] 33 [1.4] Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Hyperplasia Pelvis, Transitional Epithelium, 1 [3.0] 1 [3.0] 1 [3.0]					1 [4.0]	
Bilateral, Infarct, Multiple 1 Cortex, Renal Tubule, Accumulation, 1 [4.0] 1 [3.0] Hyaline Droplet 1 1 [4.0] 33 [1.4] Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Hyperplasia Pelvis, Transitional Epithelium, 1 [3.0]			1 [2.0]	1 [2.0]		
Cortex, Renal Tubule, Accumulation, 1 [4.0] 1 [3.0] Hyaline Droplet 1 [4.0] 1 [4.0] Glomerulus, Fibrosis 1 [4.0] 33 [1.4] Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Hyperplasia Pelvis, Transitional Epithelium, 1 [3.0]						
Hyaline Droplet Glomerulus, Fibrosis 1 [4.0] Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Hyperplasia Pelvis, Transitional Epithelium, 1 [3.0]	Bilateral, Infarct, Multiple			4.54.01	•	
Glomerulus, Fibrosis 1 [4.0] Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Hyperplasia Pelvis, Transitional Epithelium, 1 [3.0]	Cortex, Renal Tubule, Accumulation,			1 [4.0]	1 [3.0]	
Papilla, Mineralization 12 [1.1] 16 [1.0] 10 [1.0] 33 [1.4] Pelvis, Transitional Epithelium, 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Hyperplasia Pelvis, Transitional Epithelium, 1 [3.0]	Hyaline Droplet	4 [4 0]				
Pelvis, Transitional Epithelium, 1 [3.0] 2 [2.5] 1 [2.0] 1 [1.0] Hyperplasia Pelvis, Transitional Epithelium, 1 [3.0]			16 [4 0]	10 [1 0]	22 [4 4]	
Hyperplasia Pelvis, Transitional Epithelium, 1 [3.0]	Fapilia, Milleralization					
Pelvis, Transitional Epithelium, 1 [3.0]		၊ [၁.0]	رد.ی]	۱ [۷.۷]	1 [1.0]	
		1 [3 []				
MINORANZANON		1 [0.0]				
Pelvis, Dilatation 1 [2.0] 1 [2.0]			1 [2 0]	1 [2 0]		
Pelvis, Hemorrhage 1 [3.0]			ر د. در			
Renal Tubule, Casts 1 [1.0]			1 [1.0]	. [0.0]		
Renal Tubule, Mineralization 1 [4.0]	Renal Tubule, Mineralization					
Jrinary Bladder (50) (50) (50) (50)	Urinary Bladder	(50)	(50)	(50)	(50)	

a - Number of animals examined microscopically at site and number of animals with lesion b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

TDMS No. 88006 - 03

Test Type: CHRONIC

Species/Strain: RATS/F 344

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE **CAS Number:** 98-83-9 Pathologist: RENNE, R.

Date Report Regsted: 02/02/2006

Time Report Reqsted: 13:44:41 First Dose M/F: 08/06/01 / 08/06/01

FISCHER 344 RATS MALE	CONTROL	100 PPM	300 PPM	1000 PPM	
Calculus Micro Observation Only	2 [3.0]	1 [3.0]	1 [3.0]	1	
Cyst Hemorrhage Inflammation, Suppurative	1 [4.0] 1 [3.0]	2 [4.0]	1 [4.0] 2 [4.0]	1 [4.0]	
Inflammation, Chronic Necrosis	. [6.6]	1 [3.0]	2 [4.0]		
Transitional Epithelium, Hyperplasia	1 [2.0]	2 [3.0]	1 [2.0]	2 [2.0]	

^{***} END OF MALE ***

a - Number of animals examined microscopically at site and number of animals with lesion b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Species/Strain: RATS/F 344

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9 Pathologist: RENNE, R. Date Report Regsted: 02/02/2006

Time Report Regsted: 13:44:41 First Dose M/F: 08/06/01 / 08/06/01

EISCUED 244 DATS FEMALE	CONTROL	100 PPM	200 DDM	4000 DDM
FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM
Disposition Summary				
Animals Initially in Study	50	50	50	50
Early Deaths				
Accidently Killed	2			
Moribund Sacrifice	15	21	12	20
Natural Death	6	5	2	4
Survivors Terminal Sacrifice	27	24	36	26
Animals Examined Microscopically	50	50	50	50
Animais Examined Microscopically	30	30	30	30
ALIMENTARY SYSTEM				
Intestine Large, Rectum	(49)	(48)	(50)	(50)
Intestine Small, Ileum	(45)	(46)	(48)	(47)
Necrosis	,	1 [4.0]	,	,
Intestine Small, Jejunum	(45)	(46)	(48)	(48)
Diverticulum	, ,	2 [4.0]		
Liver	(50)	(50)	(50)	(50)
Angiectasis	3 [3.3]	1 [4.0]	2 [3.5]	1 [4.0]
Basophilic Focus	21	23	21	21
Basophilic Focus, Multiple	5	5	10	8
Clear Cell Focus	6	6	6	2
Clear Cell Focus, Multiple	3		1	4
Eosinophilic Focus	1		2	1
Hematopoietic Cell Proliferation	2 [4 0]	6 [4 0]	6 [4 0]	1 [3.0]
Hepatodiaphragmatic Nodule Inflammation, Suppurative	2 [4.0]	6 [4.0]	6 [4.0] 1 [4.0]	7 [4.0]
Necrosis	2 [3.0]	1 [4.0]	3 [3.0]	1 [2.0]
Thrombosis	1 [2.0]	المنجا ،	1 [3.0]	1 [Z.O]
Vacuolization Cytoplasmic	8 [2.4]	5 [2.6]	1 [3.0]	
Bile Duct, Bile Stasis	1 [4.0]	0 [=.0]	. [0.0]	
Bile Duct, Hyperplasia	r -1		2 [3.5]	
Hepatocyte, Regeneration			1 [3.0]	
Serosa, Fibrosis			1 [2.0]	
Mesentery	(14)	(17)	(12)	(10)
Necrosis	14 [3.0]	17 [3.0]	12 [3.0]	10 [3.0]
Oral Mucosa	(1)	(0)	(1)	(0)

a - Number of animals examined microscopically at site and number of animals with lesion b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Species/Strain: RATS/F 344

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE **CAS Number:** 98-83-9 Pathologist: RENNE, R.

Date Report Regsted: 02/02/2006 Time Report Regsted: 13:44:41

First Dose M/F: 08/06/01 / 08/06/01

FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM	
Inflammation, Suppurative	1 [3.0]				
Pancreas	(50)	(50)	(50)	(50)	
Acinus, Atrophy	1 [3.0]	(50)	(50)	(30)	
Duct, Cyst	1 [0.0]	1 [4.0]			
Stomach, Forestomach	(50)	(50)	(50)	(50)	
Diverticulum	(30)	1 [4.0]	(50)	(50)	
Hyperplasia, Squamous		4 [3.3]	2 [3.0]	2 [2.0]	
Inflammation, Suppurative		4 [5.5]	2 [3.0]	1 [2.0]	
Ulcer	E [2 0]	E [2 0]	2 [4 0]	2 [4.0]	
	5 [3.8]	5 [3.8]	3 [4.0]	2 [4.0]	
Epithelium, Muscularis, Inflammation,		1 [4.0]			
Suppurative	(40)	(50)	(50)	(50)	
Stomach, Glandular	(49)	(50)	(50)	(50)	
Erosion	2 [3.0]			2 [2.0]	
Hyperplasia				1 [2.0]	
Ulcer		1 [4.0]	1 [4.0]		
Tongue	(0)	(1)	(2)	(0)	
Epithelium, Hyperplasia		1 [1.0]	1 [2.0]		
ARDIOVASCULAR SYSTEM Blood Vessel Infiltration Cellular, Polymorphonuclear Inflammation Thrombosis	(0)	(1) 1 [4.0]	(0)	(1) 1 [4.0] 1 [4.0]	
Heart	(50)	(50)	(50)	(50)	
Cardiomyopathy			1 [2.0]		
Atrium, Thrombosis	1 [4.0]	1 [4.0]			
NDOCRINE SYSTEM					
Adrenal Cortex	(50)	(50)	(50)	(50)	
Angiectasis	3 [3.7]				
	7 [2 2]	5 [2.4]	10 [2.4]	8 [3.1]	
Hyperplasia	7 [2.3]				
	7 [2.3]	1 [2.0]		2 [2.5]	
Hyperplasia		1 [2.0]		2 [2.5]	
Hyperplasia Hypertrophy	1 [3.0]		1 [2.0]	2 [2.5] 1 [3.0]	
Hyperplasia Hypertrophy Necrosis Thrombosis	1 [3.0]	1 [2.0] 1 [4.0]	1 [2.0]	1 [3.0]	
Hyperplasia Hypertrophy Necrosis		1 [2.0]			

a - Number of animals examined microscopically at site and number of animals with lesion b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

TDMS No. 88006 - 03

Test Type: CHRONIC

Species/Strain: RATS/F 344

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE **CAS Number:** 98-83-9 Pathologist: RENNE, R.

Date Report Regsted: 02/02/2006

Time Report Regsted: 13:44:41 First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM	
Hyperplasia Islets, Pancreatic Pituitary Gland Cyst Hemorrhage Hyperplasia Thyroid Gland C-cell, Hyperplasia Follicle, Cyst Follicular Cell, Hyperplasia	(50) (50) 4 [3.3] 2 [4.0] 7 [3.0] (50) 8 [1.6]	(50) (49) 5 [3.2] 8 [3.1] (50) 5 [2.2]	2 [2.0] (50) (50) 3 [3.7] 1 [4.0] 8 [3.3] (50) 9 [2.0]	3 [3.0] (50) (50) 2 [2.0] 1 [4.0] 14 [3.6] (50) 6 [1.5] 1 [3.0] 2 [2.5]	
GENERAL BODY SYSTEM None					
GENITAL SYSTEM					
Clitoral Gland	(50)	(50)	(50)	(50)	
Cyst Hyperplasia Inflammation, Chronic	2 [2.5] 7 [3.9] 2 [4.0]	6 [3.7]	3 [4.0] 1 [3.0]	4 [3.8]	
Ovary Atrophy	(50) 1 [4.0]	(50)	(50)	(50)	
Cyst Uterus Cyst	9 [3.6] (50)	2 [3.5] (50)	9 [3.3] (50) 1	8 [3.6] (50)	
Hemorrhage Hydrometra	1 [4.0]	1 [4.0]	1 [4.0] 1 [3.0]	2 [4.0]	
Necrosis Thrombosis Convity Myamatrium, Hynarologia	1 [4.0]		1 [4.0]	1 [4.0]	
Cervix, Myometrium, Hyperplasia Endometrium, Hyperplasia Endometrium, Inflammation, Suppurative	2 [3.0] 6 [2.5]	3 [3.0]	4 [3.0] 1 [4.0]	5 [2.0]	
Myometrium, Hyperplasia Vagina Infiltration Cellular, Mixed Cell	(0)	1 [4.0] (1)	(0)	(1) 1 [3.0]	

HEMATOPOIETIC SYSTEM

a - Number of animals examined microscopically at site and number of animals with lesion b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Species/Strain: RATS/F 344

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:44:41
First Dose M/F: 08/06/01 / 08/06/01

FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM	
Lymph Node	(2)	(3)	(2)	(5)	
Inflammation, Chronic Active Pancreatic, Hemorrhage			4 [2 0]	1 [4.0]	
Lymph Node, Bronchial	(4)	(7)	1 [3.0] (8)	(3)	
Angiectasis	1 [4.0]	(1)	(0)	(3)	
Congestion	1 [4.0]				
Hemorrhage	. []			1 [3.0]	
Hyperplasia, Lymphoid	1 [4.0]	1 [4.0]	1 [4.0]		
Lymph Node, Mandibular	(3)	(0)	(1)	(1)	
Lymph Node, Mediastinal	(26)	(25)	(21)	(28)	
Hyperplasia, Lymphoid			1 [3.0]		
Pigmentation	(50)	(50)	(50)	1 [3.0]	
Lymph Node, Mesenteric Congestion	(50) 1 [4.0]	(50)	(50)	(50)	
Spleen	(50)	(50)	(50)	(50)	
Accessory Spleen	(30)	1 [4.0]	(50)	(30)	
Fibrosis	1 [4.0]	۱ [۲.۵]	2 [3.5]	1 [4.0]	
Hematopoietic Cell Proliferation	2 [3.5]	2 [4.0]	2 [3.5]	3 [4.0]	
Pigmentation		,	11	1 [4.0]	
Thymus	(50)	(48)	(48)	(48)	
Cyst		1 [4.0]			
TEGUMENTARY SYSTEM					
Mammary Gland	(50)	(50)	(50)	(50)	
Galactocele	2 [2.0]	3 [3.0]	4 [3.5]	1 [4.0]	
Inflammation, Suppurative		1 [4.0]	1 [4.0]		
Necrosis				1 [4.0]	
Duct, Cyst				1 [4.0]	
Epithelium, Hyperplasia	1 [1.0]	(=a)	(=0)	(50)	
Skin	(50)	(50)	(50)	(50)	
Cyst Epithelial Inclusion Hyperkeratosis	1 [3.0]	1 [4.0]			
Inflammation, Chronic	ا [٥.٥]	1 [3.0]		1 [3.0]	
Ulcer		1 [4.0]	3 [3.7]	1 [3.0] 1 [3.0]	
Subcutaneous Tissue, Hemorrhage		ر٥.٠٦ ا	0 [0.7]	1 [4.0]	
Subcutaneous Tissue, Inflammation,		1 [3.0]		. []	
Granulomatous		[]			

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE CAS Number: 98-83-9

Pathologist: RENNE, R.

Lab: BNW

Date Report Regsted: 02/02/2006

First Dose M/F: 08/06/01 / 08/06/01

Time Report Reqsted: 13:44:41

Species/Strain: RATS/F 344

FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM	
MUSCULOSKELETAL SYSTEM					
Bone	(50)	(50)	(50)	(50)	
Maxilla, Fracture	1	(4)	(0)	(0)	
Skeletal Muscle Infiltration Cellular, Lipocyte	(2) 1 [4.0]	(1)	(0)	(0)	
NERVOUS SYSTEM					
Brain	(50)	(50)	(50)	(50)	
Compression	7 [3.4]	7 [3.7]	11 [3.3]	8 [3.5]	
Hemorrhage	6 [3.5]	4 [3.8]	5 [3.2]	1 [4.0]	
Cerebellum, Hydrocephalus		1 [4.0]			
Cerebrum, Infiltration Cellular, Mononuclear Cell, Focal	1 [2.0]				
RESPIRATORY SYSTEM					
Larynx	(50)	(50)	(50)	(50)	
Foreign Body	1 [4.0]	1 [4.0]	2 [4.0]	3 [4.0]	
Inflammation, Suppurative	2 [3.5]		1 [2.0]		
Inflammation, Chronic	1 [1.0]	1 [1.0]		4 [1.5]	
Epiglottis, Metaplasia, Squamous	1 [1.0]			1 [1.0]	
Respiratory Epithelium, Hyperplasia	1 [4.0]	1 [2.0]	2 [2.5]	2 [2.5]	
Respiratory Epithelium, Metaplasia,			1 [2.0]		
Squamous Lung	(50)	(50)	(50)	(50)	
Hemorrhage	1 [4.0]	(30)	1 [2.0]	1 [4.0]	
Infiltration Cellular, Polymorphonuclear	, []	1 [4.0]	1 [2.0]	1 [1.0]	
Inflammation, Suppurative		. [•]	1 [3.0]		
Inflammation, Granulomatous		1 [3.0]	r1		
Inflammation, Chronic	5 [1.8]	1 [2.0]	6 [1.5]	5 [1.8]	
Alveolar Epithelium, Hyperplasia	3 [4.0]	6 [3.5]	2 [2.5]	5 [3.2]	
Alveolar Epithelium, Metaplasia,	1 [3.0]				
Squamous Alveolus, Infiltration Cellular, Histiocyte	20 [1.1]	19 [1.1]	22 [1.0]	30 [1.0]	
Bronchiole, Foreign Body	20[1.1]	19[1.1]	22 [۱۰۵]	30 [1.0]	
Bronchiole, Hyperplasia	1 [2.0]	1		1 [2.0]	
Bronchiole, Inflammation, Chronic	. [=,0]	1 [3.0]		. [=.0]	

a - Number of animals examined microscopically at site and number of animals with lesion

b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

Species/Strain: RATS/F 344

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE **CAS Number:** 98-83-9

Pathologist: RENNE, R.

Date Report Regsted: 02/02/2006 Time Report Reqsted: 13:44:41

First Dose M/F: 08/06/01 / 08/06/01

FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM	
Interstitium, Fibrosis				1 [2.0]	
Nose	(49)	(49)	(50)	(50)	
Foreign Body	1	2	3	2	
Inflammation, Suppurative	2 [2.5]	5 [2.6]	6 [2.0]	6 [2.0]	
Inflammation, Chronic	_ []	- []	- []	1 [1.0]	
Glands, Dilatation			2 [1.5]	. []	
Goblet Cell, Hyperplasia	1 [2.0]	1 [2.0]	3 [2.0]	3 [1.7]	
Nasolacrimal Duct, Inflammation,	1 [2.0]	1 [2.0]	4 [2.3]	2 [2.5]	
Suppurative	. [2.0]	. [2.0]	. [2.0]	2 [2.0]	
Olfactory Epithelium, Degeneration	1 [1.0]	1 [1.0]	7 [1.3]	24 [1.1]	
Olfactory Epithelium, Degeneration,	4 [1.3]	8 [1.4]	6 [1.8]	4 [1.8]	
Hyaline	1 [1.0]	0[1.1]	0 [1.0]	1 [1.0]	
Olfactory Epithelium, Hyperplasia, Basal		14 [1.0]	30 [1.0]	49 [1.6]	
Cell		[1.0]	00 [1.0]	10 [1:0]	
Olfactory Epithelium, Metaplasia	1 [2.0]			1 [3.0]	
Respiratory Epithelium, Degeneration,	1 [1.0]	3 [1.7]	2 [1.0]	1 [0.0]	
Hyaline	1 [1.0]	5[1.7]	2 [1.0]		
Respiratory Epithelium, Hyperplasia		1 [2.0]	1 [2.0]	1 [2.0]	
Respiratory Epithelium, Metaplasia,	1 [1.0]	1 [2.0]	2 [2.0]	2 [1.5]	
Squamous	1 [1.0]		ر [۲.۵]	2 [1.0]	
Pleura	(16)	(13)	(15)	(30)	
Inflammation, Chronic	16 [1.1]	13 [1.0]	15 [1.0]	27 [1.0]	
Mesothelium, Hyperplasia	10 [1.1]	13 [1.0]	13 [1.0]	1 [4.0]	
wesothenum, rryperplasia				1 [4.0]	
PECIAL SENSES SYSTEM					
Eye	(48)	(49)	(50)	(50)	
Atrophy	(. •)	(10)	(33)	2 [4.0]	
Inflammation, Suppurative	1 [4.0]			2 []	
Anterior Chamber, Hemorrhage	. [•]			1 [4.0]	
Lens, Cataract	5 [3.0]	1 [4.0]	4 [3.8]	5 [3.4]	
Lens, Mineralization	G [0.0]	الم.ح] ،	3 [4.0]	J [J. 1]	
Retina, Atrophy	2 [3.0]		0 [1 .0]	2 [3.5]	
Sclera, Metaplasia, Osseous	2 [0.0]	1 [2.0]		2 [5.5]	
Ociera, Metapiasia, Osseous		1 [2.0]			
RINARY SYSTEM					
Kidney	(49)	(50)	(50)	(50)	
Cyst	` '	` '	`1 ′	` '	

a - Number of animals examined microscopically at site and number of animals with lesion b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)

TDMS No. 88006 - 03 Test Type: CHRONIC

Species/Strain: RATS/F 344

Route: RESPIRATORY EXPOSURE WHOLE BODY

P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]

ALPHA-METHYLSTYRENE **CAS Number:** 98-83-9 Pathologist: RENNE, R.

Date Report Regsted: 02/02/2006

Time Report Regsted: 13:44:41 First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

FISCHER 344 RATS FEMALE	CONTROL	100 PPM	300 PPM	1000 PPM	
Infiltration Cellular, Lipocyte			1 [1.0]		
Nephropathy	34 [1.6]	27 [1.3]	35 [1.5]	31 [1.8]	
Capsule, Hemorrhage		1 [4.0]			
Cortex, Infarct		1		1	
Cortex, Infarct, Multiple			1		
Papilla, Mineralization	1 [1.0]	6 [1.0]	8 [1.0]	7 [1.0]	
Pelvis, Transitional Epithelium, Hyperplasia	5 [2.2]	3 [1.7]			
Pelvis, Transitional Epithelium, Mineralization	31 [1.5]	26 [1.0]	31 [1.1]	16 [1.0]	
Pelvis, Dilatation		1 [2.0]			
Renal Tubule, Degeneration	1 [4.0]				
Renal Tubule, Pigmentation				2 [4.0]	
Ureter	(1)	(0)	(0)	(0)	
Transitional Epithelium, Hyperplasia	1 [3.0]	• •	, ,	, ,	
Urinary Bladder	(50)	(50)	(50)	(50)	
Serosa, Edema		1 [4.0]			
Transitional Epithelium, Hyperplasia		1 [1.0]		2 [2.5]	

*** END OF REPORT ***

a - Number of animals examined microscopically at site and number of animals with lesion b - Average severity grade (1-minimal; 2-mild; 3-moderate; 4-marked)